



30-045-26210

Gas Analysis Certificate

GPA Standard 2261-13

Method Name C6+ Excel Recalc2
Last calibration date 6/19/2015 8:47:52 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 233E-DK	Meter ID:	3004526210(BH)
Sampled by:	Brandon K.	Date Sampled:	052815
Analyzed by:	Logan Richter	Date Received:	060215
Sample Pressure:	70 psig	Date Analyzed:	060315
Sample Temperature:	NA	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	2.107	0.432	0.214
Oxygen	0.119	0.195	0.011
Nitrogen	1.477	2.122	0.163
Carbon Dioxide	1.000	2.257	0.171
Methane	80.470	66.192	13.647
Ethane	9.150	14.107	2.448
Propane	3.652	8.257	1.006
i-Butane	0.540	1.610	0.177
n-Butane	0.923	2.750	0.291
i-Pentane	0.311	1.149	0.114
n-Pentane	0.251	0.928	0.091
C6+	0.000	0.000	0.000
	100.000	100.000	18.332

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99710	C2+	4.127
Density (G) (Dry Gas)	0.67338	C3+	1.679
Component MW Total	19.50	C5+	0.205
Heating Value (Dry Ideal) Total BTU	1136.72	Heating Value (Sat Ideal) Total BTU	1116.89
Heating Value (Dry Real) Total BTU	1140.03	Heating Value (Sat Real) Total BTU	1120.03

Reviewed by

07/01/2015
mm/dd/yyyy



Gas Analysis Certificate

GPA Standard 2261-13

Method Name C6+ Excel Recalc2
Last calibration date 6/19/2015 8:47:52 AM

Client:	BP	Project #:	03143-0880
Site Name:	GCU 233E	Meter ID:	3004526210 (CSG)
Sampled by:	Brandon K.	Date Sampled:	052815
Analyzed by:	Logan Richter	Date Received:	060215
Sample Pressure:	177 psig	Date Analyzed:	060315
Sample Temperature	NA	Analysis Time:	Standard

Component Results (14.696)

Name	Qty (Norm) [Mol %]	Wt Percent (%)	GPM
Helium	0.394	0.093	0.040
Oxygen	0.022	0.042	0.002
Nitrogen	0.593	0.977	0.065
Carbon Dioxide	0.062	0.161	0.011
Methane	93.984	88.667	15.928
Ethane	3.807	6.731	1.018
Propane	0.775	2.010	0.213
i-Butane	0.119	0.408	0.039
n-Butane	0.146	0.500	0.046
i-Pentane	0.057	0.244	0.021
n-Pentane	0.039	0.165	0.014
C6+	0.000	0.002	0.000
	100.000	100.000	17.397

Calculations at Pressure Base 14.696

Compressibility (Z) (Dry Gas)	0.99778	C2+	1.352
Density (G) (Dry Gas)	0.58712	C3+	0.334
Component MW Total	17.00	C5+	0.035
Heating Value (Dry Ideal) Total BTU	1048.63	Heating Value (Sat Ideal) Total BTU	1030.33
Heating Value (Dry Real) Total BTU	1050.96	Heating Value (Sat Real) Total BTU	1032.54

RSB
Reviewed by

07/01/2015
mm dd/yyyy

Dwights Discover CD-ROM
Copyright 1910 Rockies

ID: R-406437-0 Original
Run Date: 19-Dec-100

Stage : New Mexico NM Merid 28N - 12W - 27 nw se

County: SAN JUAN

Oper: AMOCO PRODUCTION CO

F : BASIN DK

Compl: 05/21/1985 D G GAS

Well: GALLEGOS CANYON UNIT #233E

Last Info: 07/05/1988

Ftg: 1850 fsl 1850 fel

Lat/Long by TDG: 36.631042 - 108.095840

Obj: 6010 Gallup/Dakota Permit #:

01/25/1985 API: 30-045-2621000

Elev: 5792KB

Spud: 04/07/1985

Contr: Four Corners

Rig #: 3

TD: 6240 on 04/15/1985

Dakota

PB: 6196

Elev: 5792KB

FORMATION TOPS

(Type: L=Log S=Sample V=True Vertical)

(Source: H=Dwights, I=IOG, T=Govt, S=Shell, U=USGS, R=NRIS

M=Munger, N=NDGS, B=Boyd, G=GDS, X=Proprietary)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Fruitland	1074	4718	L H	Point Lookout	3968	1824	L H
Pictured Cliffs	1510	4282	L H	Gallup	5145	647	L H
Cliff House	3075	2717	L H	Greenhorn	5932	-140	L H
Menefee	3246	2546	L H	Dakota	6022	-230	L H

Notes :

Casing: 9 5/8 @ 430 w/276

7 @ 6239 w/1174

Core :

None

DST :

None

Logs : DIL SPL GR FDC Cal

Tubing: 2 3/8 @ 6130

Perfs :

6133-6148 (Dakota

)

6100-6124 (Dakota

)

6090-6100 (Dakota

)

6042-6048 (Dakota

)

w/4 SPF - frac overall w/89,000 gal 69 qual foam 145,000# 20/40 sd

PZone :

6042-6148 (Dakota

)

IP : F 2716 MCFGPD on 3/4 in ck, no oil or wtr rptd, CP 500 FTP 219

Journl: 4/9/85 rig reported on site.

4/17/85 SI; WOPT.

4/30/85 pressure testing.

6/26/85 completed gas well.